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# SPRAY-OCCASIONS: June 1983 to June 1984

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SUMMARY This paper presents estimates of the number of spray-occasions during the 1983/4 season. The estimates are calculated from standard meteorological observations using criteria designed to be appropriate for 'residual' or 'hormone' types of herbicide, and 'Conventional' or 'Low Ground Pressure' types of spraying vehicle. The estimates are compared with averages for 1970/83.

## INTRODUCTION

Weather conditions which affect spraying have been discussed by Spackman (1983a) whilst "spray-occasion" analyses have been presented at each Herbicide Review since 1979. The method of analysis, criteria adopted and stations used are the same as presented at the BCPC Review of Herbicide Usage 1983 - see Spackman (1983).

## ANALYSIS

### Criteria

The criteria used to identify occasions suitable for spraying are reproduced in table 1. Only results based on the criteria for 'residual' and 'hormone' type chemicals are presented in this paper; it has been noted previously that there is only a little difference between the average number of spray-occasions with 'contact', 'contact-hormone' and 'hormone' criteria.

### Stations

Meteorological data are used from 5 stations:

Kinloss, Grampian - about 50 km east north east of Inverness

Aldergrove, Northern Ireland - about 20 km west of Belfast

Waddington, Lincolnshire - about 10 km south of Lincoln

Boscombe Down, Wiltshire - about 40 km north west of Southampton

Mount Batten, Devon - just south of Plymouth

These stations are taken to identify the broad-scale variation in the number of spray-occasions in arable areas across the United Kingdom. More specific results may be required for some purposes or for stations in locations unlikely to be represented by the above stations. (Such analyses may be obtained from the Agricultural Meteorology Department of the Meteorological Office at Bracknell, Berkshire or from the Agricultural Meteorology Departments based at the MAFF/ADAS Regional Offices).

## RESULTS

The numbers of spray-occasions each month are given in table 2 and the corresponding differences from average in table 3.

### Conventional vehicles

Summer 1983. In June the calculated number of spray-occasions was generally near normal but a little below normal at Waddington and above normal at Mount Batten. July gave an exceptionally large number of occasions except at Kinloss where the number was closer to normal. In August the number of occasions was above normal at all stations.

Autumn 1983. In September the number of spray-occasions was generally below normal. In October the number of occasions was usually a little below normal - at this time of the year this also means few spray-occasions (particularly with the 'hormone' criteria). In November, the stations in England had an above average number of occasions, especially using the 'residual' criteria.

Winter 1983. December and January, as usual, provided no spray-occasions whilst in February there were, unusually, a few occasions at both Kinloss and Mount Batten.

Spring 1984. In March, the number of spray-occasions was above normal at Boscombe Down and considerably above normal at Mount Batten; elsewhere the number of occasions was a little below normal. In April and May the number of occasions was above normal - considerably so at Kinloss and Aldergrove. In June the number of occasions continued to be above normal except at Kinloss for the 'residual' criteria.

### Low Ground Pressure vehicles

The benefits of using Low Ground Pressure vehicles (as compared with Conventional vehicles) are shown in table 4.

For the "hormone" criteria benefits seldom occurred - and then only in the autumn. For the "residual" criteria the picture is quite different - there was a marked advantage at one location or another in most months from September to March. Note particularly the increased number of occasions at Aldergrove and during the months of February and March.

## DISCUSSION

The results given above have been brought together in a "Which" type summary in table 5. This highlights the main features of each month. Monthly summaries of such an index as "spray-occasions" can easily mask important variations (especially if there are compensating differences during the month). This year a new table (table 6) has been added which shows the number of spray-occasions in 10-day intervals from September to June. It shows how, for instance, the major increase in spray-occasions for Low Ground Pressure vehicles using the 'residual' criteria occurred in mid to late February. For the 'hormone' criteria the increase was not until early April in the south and late April in the north although a few occasions did occur in the south in early March. It is hoped that this table might be useful when it is necessary to link spraying opportunities with crop growth stage.

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Table 1. Spray-occasion criteria

| Constraint | Conditions |
|---|---|
| Operations | Daylight - but between 06 GMT and 20 GMT<br>Temperature $>$ 1°C<br>No standing water, glaze, frozen ground or snow lying at 12 GMT<br>Visibility $>$100 metres<br>Spray period - 5 consecutive hours |
| Sprayer | Wind speed $\geq$ 2 knots (about 1 $ms^{-1}$) and wind speed $\leq$ 9 knots (about 5 $ms^{-1}$)<br>(Wind speeds are measured at 10 m above ground) |
| Vehicle | For Conventional vehicles the Soil Moisture Deficit using a bare soil model must exceed 5 mm |
| Chemical | |

| | | Chemical Type* | | | |
|---|---|---|---|---|---|
| | | R | C | CH | H |
| - Temperature | $>$ 1°C next night | | 0 | 0 | 0 |
| | Day maximum 10°C | | | | 0 |
| - Relative Humidity | $>$ 80% if temperature 10°C | | 0 | | |
| | $<$ 95% | | | 0 | 0 |
| - Rain | $<$ 1 mm in any hour | 0 | | | |
| | $<$0.1 mm in any hour | | 0 | 0 | 0 |
| | $<$0.1 mm in each of 3 hours after spraying | | 0 | 0 | 0 |
| | $<$ 2 mm total in 9 hours commencing 3 hours before spraying | | 0 | 0 | 0 |

* R = Residual
C = Contact
CH = Contact-hormone
H = Hormone

(0 indicates that the specified criterion must be satisfied)

Spring is often a particularly significant time for crop spraying using hormone-type chemicals. This season the number of spray-occasions was good - notably at Mount Batten in March and April, and Kinloss and Aldergrove in May. The totals from March to May for Conventional vehicles using the 'hormone' criteria are the highest since before 1970.

## CONCLUSION

The number of spray-occasions tended to be above normal during the period from September 1983 to May 1984 - particularly at Kinloss and Aldergrove. They were mainly less frequent than normal in the autumn but were above normal in the spring particularly for residual-type criteria and at Kinloss and Aldergrove. Values below normal were mainly confined to September and October whilst values generally above normal occurred in November, April and May. Values much above normal occurred at some places in November, March and May.

Some difficulties may have been experienced in finding occasions on which to spray herbicides in early autumn. In spring conditions were generally favourable. Overall, from September, to May, conditions below normal were experienced only for hormone-type criteria at Waddington and Boscombe Down.

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## REFERENCE

Spackman, E A (1983a) Weather and the variation in numbers of spraying-occasions. AAB Aspects of Applied Biology 4, 1983

Spackman, E A (1983b) Spray-occasions. June 1982 to May 1983 Agricultural Memorandum No.1016(unpublished paper available from National Meteorological Library, Bracknell) also available in BCPC, 20th Review of Herbicide Usage 1983

Table 2. Spray-occasions 1983/4

| | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Conventional vehicles** | | | | | | | | | | | | | |
| Residual - | | | | | | | | | | | | | |
| Kinloss | 25 | 35 | 35 | 11 | 4 | 2 | 0 | 0 | 6 | 0 | 24 | 44 | 19 |
| Aldergrove | 26 | 43 | 34 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | 40 | 25 |
| Waddington | 20 | 46 | 37 | 10 | 10 | 12 | 0 | 0 | 0 | 3 | 20 | 28 | 33 |
| Boscombe Down | 27 | 49 | 34 | 12 | 6 | 16 | 0 | 0 | 0 | 13 | 20 | 23 | 26 |
| Mount Batten | 35 | 40 | 33 | 11 | 4 | 15 | 0 | 0 | 9 | 23 | 19 | 25 | 28 |
| Hormone - | | | | | | | | | | | | | |
| Kinloss | 20 | 30 | 31 | 8 | 2 | 0 | 0 | 0 | 0 | 0 | 11 | 38 | 19 |
| Aldergrove | 23 | 41 | 30 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 32 | 23 |
| Waddington | 18 | 42 | 33 | 7 | 2 | 4 | 0 | 0 | 0 | 0 | 10 | 22 | 26 |
| Boscombe Down | 21 | 46 | 30 | 7 | 3 | 3 | 0 | 0 | 0 | 3 | 8 | 19 | 25 |
| Mount Batten | 29 | 39 | 29 | 9 | 2 | 5 | 0 | 0 | 0 | 10 | 18 | 19 | 28 |
| **Low Ground Pressure vehicles** | | | | | | | | | | | | | |
| Residual - | | | | | | | | | | | | | |
| Kinloss | 25 | 35 | 35 | 17 | 7 | 8 | 7 | 1 | 11 | 19 | 25 | 44 | 19 |
| Aldergrove | 26 | 43 | 34 | 14 | 5 | 16 | 10 | 1 | 15 | 31 | 24 | 40 | 25 |
| Waddington | 21 | 46 | 43 | 13 | 10 | 14 | 5 | 0 | 7 | 21 | 20 | 30 | 33 |
| Boscombe Down | 27 | 49 | 34 | 14 | 8 | 18 | 7 | 4 | 12 | 24 | 21 | 26 | 29 |
| Mount Batten | 35 | 40 | 33 | 13 | 14 | 16 | 7 | 2 | 15 | 23 | 24 | 25 | 28 |
| Hormone - | | | | | | | | | | | | | |
| Kinloss | 20 | 30 | 31 | 13 | 2 | 1 | 0 | 0 | 1 | 0 | 11 | 38 | 19 |
| Aldergrove | 23 | 41 | 30 | 9 | 2 | 5 | 1 | 0 | 1 | 1 | 14 | 32 | 23 |
| Waddington | 18 | 42 | 36 | 9 | 2 | 4 | 0 | 0 | 0 | 1 | 10 | 23 | 26 |
| Boscombe Down | 21 | 46 | 30 | 8 | 4 | 3 | 0 | 0 | 0 | 5 | 8 | 19 | 28 |
| Mount Batten | 29 | 39 | 29 | 10 | 11 | 6 | 3 | 0 | 0 | 10 | 20 | 19 | 28 |

Table 3. Spray-occasions 1983/84 - difference from average (January 1970 to May 1983)

| | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Conventional vehicles** | | | | | | | | | | | | | |
| Residual- | | | | | | | | | | | | | |
| Kinloss | + 1 | +10 | + 8 | - 3 | - 3 | + 1 | 0 | 0 | + 4 | - 7 | + 8 | +22 | - 5 |
| Aldergrove | + 3 | +17 | + 7 | - 7 | - 3 | 0 | 0 | 0 | 0 | - 4 | + 5 | +19 | + 2 |
| Waddington | - 8 | +17 | +10 | -10 | + 1 | +11 | 0 | 0 | 0 | - 1 | + 5 | + 7 | + 7 |
| Boscombe Down | + 2 | +22 | + 6 | - 5 | - 1 | +14 | 0 | 0 | 0 | + 9 | + 7 | + 4 | + 1 |
| Mount Batten | +12 | +15 | + 7 | - 4 | - 3 | +16 | 0 | 0 | +19 | +18 | + 4 | + 6 | + 5 |
| Hormone- | | | | | | | | | | | | | |
| Kinloss | + 2 | +11 | +10 | - 4 | - 3 | 0 | 0 | 0 | 0 | - 1 | + 3 | +23 | + 1 |
| Aldergrove | + 3 | +19 | + 7 | - 5 | - 2 | 0 | 0 | 0 | 0 | - 1 | + 3 | +16 | + 3 |
| Waddington | - 5 | +17 | +12 | -10 | - 4 | + 4 | 0 | 0 | 0 | - 2 | + 2 | + 6 | + 4 |
| Boscombe Down | - 1 | +22 | + 6 | - 7 | - 1 | + 3 | 0 | 0 | 0 | + 1 | 0 | + 4 | + 9 |
| Mount Batten | +10 | +18 | + 6 | - 5 | - 4 | + 4 | 0 | 0 | 0 | + 7 | + 7 | + 4 | + 9 |
| **Low Ground Pressure vehicles** | | | | | | | | | | | | | |
| Residual- | | | | | | | | | | | | | |
| Kinloss | 0 | + 9 | + 5 | + 1 | - 6 | + 1 | + 2 | - 4 | + 2 | + 6 | + 6 | +21 | - 6 |
| Aldergrove | 0 | +14 | + 2 | - 5 | -11 | + 9 | + 3 | - 5 | + 5 | +18 | + 1 | +15 | - 1 |
| Waddington | - 6 | +15 | +12 | -10 | - 7 | + 6 | 0 | - 5 | - 2 | + 8 | 0 | + 6 | + 6 |
| Boscombe Down | + 1 | +21 | + 4 | - 6 | - 6 | + 9 | + 1 | - 2 | + 4 | +13 | + 5 | + 6 | + 3 |
| Mount Batten | +12 | +14 | + 5 | - 8 | - 1 | + 8 | 0 | - 5 | + 5 | +11 | + 6 | + 5 | + 5 |
| Hormone- | | | | | | | | | | | | | |
| Kinloss | + 1 | +10 | + 8 | - 1 | - 5 | 0 | 0 | 0 | 0 | - 2 | + 3 | +23 | 0 |
| Aldergrove | + 1 | +17 | + 4 | - 5 | - 8 | + 4 | + 1 | 0 | 0 | - 2 | 0 | +22 | + 1 |
| Waddington | - 5 | +16 | +12 | - 9 | - 7 | + 3 | 0 | 0 | 0 | - 3 | 0 | + 5 | + 3 |
| Boscombe Down | - 2 | +22 | + 5 | - 7 | - 4 | + 2 | 0 | - 1 | - 1 | - 2 | + 1 | + 3 | + 5 |
| Mount Batten | +10 | +17 | + 5 | - 7 | + 1 | + 3 | + 2 | - 1 | - 1 | + 5 | + 7 | + 2 | + 9 |

Table 4. Spray-occasions 1983/84 - extra occasions for Low Ground Pressure vehicles

| | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Residual- | | | | | | | | | | | | | |
| Kinloss | 0 | 0 | 0 | 6 | 3 | 6 | 7 | 1 | 5 | 19 | 1 | 0 | 0 |
| Aldergrove | 0 | 0 | 0 | 9 | 5 | 16 | 10 | 1 | 15 | 31 | 2 | 0 | 0 |
| Waddington | 1 | 0 | 6 | 3 | 0 | 2 | 5 | 0 | 7 | 18 | 0 | 2 | 0 |
| Boscombe Down | 0 | 0 | 0 | 2 | 2 | 2 | 7 | 4 | 12 | 11 | 1 | 3 | 3 |
| Mount Batten | 0 | 0 | 0 | 2 | 10 | 1 | 7 | 2 | 6 | 0 | 5 | 0 | 0 |
| Hormone- | | | | | | | | | | | | | |
| Kinloss | 0 | 0 | 0 | 5 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| Aldergrove | 0 | 0 | 0 | 4 | 2 | 5 | 1 | 0 | 1 | 1 | 0 | 0 | 0 |
| Waddington | 0 | 0 | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 |
| Boscombe Down | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 3 |
| Mount Batten | 0 | 0 | 0 | 1 | 9 | 1 | 3 | 0 | 0 | 0 | 2 | 0 | 0 |

Table 5. Spray-occasions 1983/84 - Summary (compared with normal)

| | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Conventional vehicles** | | | | | | | | | | | | | |
| Residual- | | | | | | | | | | | | | |
| Kinloss | 0 | + | + | 0 | (0) | (0) | (0) | (0) | 0 | (-) | + | ++++ | 0 |
| Aldergrove | 0 | +++ | + | (-) | (0) | (0) | (0) | (0) | (0) | (0) | 0 | +++ | 0 |
| Waddington | - | +++ | + | - | + | ++ | (0) | (0) | (0) | (0) | 0 | + | + |
| Boscombe Down | 0 | ++++ | + | - | 0 | +++ | (0) | (0) | (0) | + | + | 0 | 0 |
| Mount Batten | ++ | ++ | + | 0 | (0) | +++ | (0) | (0) | + | +++ | 0 | + | 0 |
| Hormone- | | | | | | | | | | | | | |
| Kinloss | 0 | ++ | + | 0 | (0) | (0) | (0) | (0) | (0) | (0) | 0 | ++++ | 0 |
| Aldergrove | 0 | +++ | + | (-) | (0) | (0) | (0) | (0) | (0) | (0) | 0 | +++ | 0 |
| Waddington | 0 | +++ | ++ | - | (0) | (0) | (0) | (0) | (0) | (0) | 0 | + | 0 |
| Boscombe Down | 0 | ++++ | + | - | (0) | (0) | (0) | (0) | (0) | (0) | 0 | 0 | 0 |
| Mount Batten | + | +++ | + | 0 | (0) | (0) | (0) | (0) | (0) | + | + | 0 | + |
| **Low Ground Pressure vehicles** | | | | | | | | | | | | | |
| Residual- | | | | | | | | | | | | | |
| Kinloss | 0 | + | + | 0 | - | 0 | 0 | (0) | 0 | + | + | ++++ | - |
| Aldergrove | 0 | ++ | 0 | - | (--) | + | 0 | (0) | 0 | +++ | 0 | ++ | 0 |
| Waddington | - | +++ | + | -- | - | + | (0) | (0) | 0 | + | 0 | + | + |
| Boscombe Down | 0 | ++++ | 0 | - | - | + | 0 | (0) | 0 | ++ | 0 | + | 0 |
| Mount Batten | ++ | ++ | 0 | - | 0 | + | 0 | (0) | 0 | ++ | + | 0 | 0 |
| Hormone- | | | | | | | | | | | | | |
| Kinloss | 0 | + | + | 0 | (0) | (0) | (0) | (0) | (0) | (0) | 0 | ++++ | 0 |
| Aldergrove | 0 | +++ | 0 | 0 | (-) | (0) | (0) | (0) | (0) | (0) | 0 | ++++ | 0 |
| Waddington | 0 | +++ | ++ | - | (-) | (0) | (0) | (0) | (0) | (0) | 0 | 0 | 0 |
| Boscombe Down | 0 | ++++ | 0 | - | (0) | (0) | (0) | (0) | (0) | (0) | 0 | 0 | 0 |
| Mount Batten | + | +++ | 0 | - | 0 | 0 | (0) | (0) | (0) | 0 | + | 0 | + |

KEY

| | |
|---|---|
| () | 5 or less spray-occasions |
| ++++ | >20 extra occasions than normal |
| +++ | 16-20 extra occasions than normal |
| ++ | 11-15 extra occasions than normal |
| + | 6-10 extra occasions than normal |
| 0 | 5 fewer to 5 extra occasions than normal |
| - | 6-10 fewer occasions than normal |
| -- | 11-15 fewer occasions than normal |

Table 6. Spray-occasions 1983/84

| | Residual | | | | | Hormone | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | KIN | ALD | WAD | BOS | MB | KIN | ALD | WAD | BOS | MB |
| | | | | | CONVENTIONAL | | | | | |
| 1-10 Sep | 5 | 3 | 5 | 3 | 4 | 4 | 3 | 3 | 1 | 4 |
| 11-20 | 4 | 0 | 2 | 0 | 0 | 3 | 0 | 2 | 0 | 0 |
| 21-30 | 2 | 2 | 3 | 9 | 7 | 1 | 2 | 2 | 6 | 5 |
| 1-10 Oct | 4 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 1 | 0 |
| 11-20 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21-31 | 0 | 0 | 7 | 4 | 4 | 0 | 0 | 2 | 2 | 2 |
| 1-10 Nov | 0 | 0 | 6 | 6 | 6 | 0 | 0 | 4 | 2 | 4 |
| 11-20 | 1 | 0 | 6 | 8 | 6 | 0 | 0 | 0 | 1 | 1 |
| 21-30 | 1 | 0 | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 0 |
| 1 Dec-10 Feb | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11-20 Feb | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 |
| 21-29 | 6 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 |
| 1-10 Mar | 0 | 0 | 0 | 5 | 7 | 0 | 0 | 0 | 2 | 5 |
| 11-20 | 0 | 0 | 1 | 6 | 9 | 0 | 0 | 0 | 0 | 1 |
| 21-31 | 0 | 0 | 2 | 2 | 7 | 0 | 0 | 0 | 1 | 4 |
| 1-10 Apr | 7 | 7 | 11 | 11 | 6 | 1 | 0 | 3 | 3 | 5 |
| 11-20 | 3 | 2 | 5 | 8 | 11 | 0 | 1 | 4 | 4 | 11 |
| 21-30 | 14 | 13 | 4 | 1 | 2 | 10 | 13 | 3 | 1 | 2 |
| 1-10 May | 13 | 14 | 10 | 6 | 2 | 12 | 10 | 7 | 6 | 2 |
| 11-20 | 15 | 16 | 11 | 13 | 15 | 14 | 14 | 9 | 9 | 12 |
| 21-31 | 16 | 10 | 7 | 4 | 8 | 12 | 8 | 6 | 4 | 5 |
| 1-10 Jun | 9 | 9 | 10 | 6 | 10 | 9 | 8 | 5 | 6 | 10 |
| 11-20 | 7 | 15 | 16 | 13 | 16 | 7 | 14 | 14 | 12 | 16 |
| 21-30 | 3 | 1 | 7 | 7 | 2 | 3 | 1 | 7 | 7 | 2 |
| | | | | | LOW GROUND PRESSURE | | | | | |
| 1-10 Sep | 5 | 5 | 5 | 3 | 4 | 4 | 4 | 3 | 1 | 4 |
| 11-20 | 10 | 3 | 2 | 0 | 1 | 8 | 0 | 2 | 0 | 0 |
| 21-30 | 2 | 6 | 6 | 11 | 8 | 1 | 5 | 4 | 7 | 6 |
| 1-10 Oct | 4 | 0 | 0 | 2 | 1 | 2 | 0 | 0 | 1 | 1 |
| 11-20 | 2 | 2 | 3 | 1 | 3 | 0 | 0 | 0 | 1 | 2 |
| 21-31 | 1 | 3 | 7 | 5 | 10 | 0 | 2 | 2 | 2 | 8 |
| 1-10 Nov | 4 | 6 | 6 | 6 | 6 | 1 | 4 | 4 | 2 | 4 |
| 11-20 | 3 | 7 | 6 | 8 | 6 | 0 | 1 | 0 | 1 | 1 |
| 21-30 | 1 | 3 | 2 | 4 | 4 | 0 | 0 | 0 | 0 | 1 |
| 1-10 Dec | 2 | 4 | 3 | 4 | 3 | 0 | 1 | 0 | 0 | 2 |
| 11-20 | 3 | 3 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 |
| 21-31 | 2 | 3 | 1 | 1 | 3 | 0 | 0 | 0 | 0 | 1 |
| 1-10 Jan | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11-20 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| 21-31 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1-10 Feb | 1 | 2 | 2 | 1 | 2 | 0 | 0 | 0 | 0 | 0 |
| 11-20 | 3 | 3 | 3 | 4 | 6 | 1 | 0 | 0 | 0 | 0 |
| 21-29 | 7 | 10 | 2 | 7 | 7 | 0 | 1 | 0 | 0 | 0 |
| 1-10 Mar | 7 | 12 | 9 | 10 | 7 | 0 | 1 | 1 | 3 | 5 |
| 11-20 | 9 | 10 | 3 | 6 | 9 | 0 | 0 | 0 | 0 | 1 |
| 21-31 | 3 | 9 | 9 | 8 | 7 | 0 | 0 | 0 | 2 | 4 |
| 1-10 Apr | 8 | 9 | 11 | 12 | 11 | 1 | 0 | 3 | 3 | 7 |
| 11-20 | 3 | 2 | 5 | 8 | 11 | 0 | 1 | 4 | 4 | 11 |
| 21-30 | 14 | 13 | 4 | 1 | 2 | 10 | 13 | 3 | 1 | 2 |
| 1-10 May | 13 | 14 | 10 | 6 | 2 | 12 | 10 | 7 | 6 | 2 |
| 11-20 | 15 | 16 | 11 | 13 | 15 | 14 | 14 | 9 | 9 | 12 |
| 21-31 | 16 | 10 | 9 | 7 | 8 | 12 | 8 | 7 | 4 | 5 |
| 1-10 Jun | 9 | 9 | 10 | 9 | 10 | 9 | 8 | 5 | 9 | 10 |
| 11-20 | 7 | 15 | 16 | 13 | 16 | 7 | 14 | 14 | 12 | 16 |
| 21-30 | 3 | 1 | 7 | 7 | 2 | 3 | 1 | 7 | 7 | 2 |

Station key: KIN - Kinloss, ALD - Aldergrove, WAD - Waddington, BOS - Boscombe Down, MB - Mount Batten